



**SP 3-95R**

### **COAST GUARD SPECIAL PERMIT 3-95R**

This Special Permit is issued pursuant to 46 CFR 148.01-9 of the U.S. Coast Guard (USCG) Carriage of Solid Hazardous Materials in Bulk Regulations to authorize bulk shipments of metal sulfide concentrate (lead, copper, nickel iron, and/or zinc sulfide concentrate) under the conditions described below. This permit does not relieve any shipper or carrier from compliance with any applicable requirement of 46 CFR 148 except as specifically provided for herein.

1. **BASIS** - The Doe Run Company letter of January 24, 2001.

2. **COMMODITIES** -

- a. Copper concentrate, consisting primarily of chalcopyrite (copper-iron sulfide) with some lead sulfide.
- b. Lead concentrate, containing primarily lead sulfide.
- c. Zinc concentrate, containing primarily zinc sulfide with some minor iron sulfide and lead sulfide admixture.

3. **PROPER SHIPPING NAME AND UN NUMBER** -

**USDOT:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(CONTAINS LEAD SULFIDE), UN 3077.

**IMO:** METAL SULFIDE CONCENTRATE (no UN Number).

4. **REGULATION WAIVED OR AFFECTED** - 46 CFR 148.01-7.

5. **AUTHORIZED SHIPPER** - The Doe Run Company, 1801 Park 270 Drive, Suite 300, St. Louis, MO 63146.

6. **MODE OF TRANSPORTATION** - Cargo vessel and unmanned covered barge, including LASH barges.

7. **HAZARD CLASSIFICATION** -

**USDOT:** Class 9 (Only concentrates containing 0.02% or more lead sulfide or 0.002% or more arsenic by weight).

**IMO:** Material hazardous only in bulk (MHB).

8. **PROPERTIES** Solid, finely divided sulfide concentrates of copper, iron, lead, nickel, zinc, or other metalliferous ores. Liable to oxidation and may have a tendency to self-heat with associated oxygen depletion and emission of toxic fumes. Subject to

liquefaction if its moisture content exceeds its flow moisture point. Metal sulfide concentrates containing a significant quantity of lead sulfide are skin irritants, and are hazardous if ingested or inhaled.

## 9. SPECIAL TRANSPORTATION REQUIREMENTS -

- a. The shipments must be made to or from a designated waterfront facility that meets the requirements of 33 CFR 126.05(a) or a midstream anchorage acceptable to the cognizant Coast Guard Captain of the Port.
- b. The cognizant Coast Guard Captain of the Port must be informed at least 24 hours in advance of both loading and unloading operations.
- c. The loading and unloading operations must be supervised by a person familiar with the safety precautions and emergency procedures associated with handling the specific metal sulfide concentrate to be loaded or unloaded.
- d. Precautions must be taken to minimize personnel exposure to dust, including maintenance of OSHA Permissible Exposure Limits (PELs). When necessary, and in accordance with OSHA regulations (29 CFR 1910), persons working in contact with metal sulfide concentrates containing lead sulfide or arsenic must wear dust respirators, protective clothing and gloves. If clothing becomes contaminated, it must be cleaned before reuse.
- e. If, during loading and unloading operations, OSHA action levels for lead or arsenic are exceeded, smoking, eating and drinking shall be prohibited in the vessel's holds and other stowage spaces, on the weatherdeck of the vessel and in the vicinity of cargo handling operations.
- f. During cargo transfer operations, appropriate precautions must be taken to minimize dispersal of this material to the environment. Tarpaulins or plastic sheets may be used over decks and water to collect any spillage of material. The metal sulfide concentrate must be sufficiently moist during loading and unloading operations to minimize the generation of dust.
- g. The performance of hot work (welding, cutting, etc.) by any person shall be prohibited during loading and unloading unless special provisions, including a fire watch, have been made.
- h. The hatch covers must remain closed at all times except during loading and unloading to prevent dispersal and water accumulation.
- i. No person may enter the hold of a vessel or cargo compartment of a barge containing a metal sulfide concentrate, unless an emergency exists and the person entering the hold or cargo compartment is wearing the self-contained breathing apparatus prescribed in paragraph 9.m(7); or
  - (1) The atmosphere in the hold or cargo compartment has been tested and contains sufficient oxygen at a concentration of not less than 19.5%; and

- (2) If the information provided under paragraph 9.p(1) indicates that the metal sulfide concentrate may generate the toxic gas sulfur dioxide or hydrogen sulfide, the atmosphere in the hold has been tested for toxic gases and the concentration of the toxic gases is less than the following threshold limit values (TLV):

Sulfur dioxide	2.0 ppm
Hydrogen Sulfide	10.0 ppm

- j. Each bill of lading, shipping order, or other shipping paper issued in connection with a metal sulfide concentrate under the terms herein, must bear the notation "USCG Special Permit 3-95R."
- k. After the cargo is discharged, the hold of the vessel or cargo compartment of the barge must be thoroughly cleaned before a different cargo is loaded. Disposal of cargo residues and contaminated items must be in accordance with applicable EPA and State laws and regulations.
- l. Whenever a metal sulfide concentrate is being transported by cargo vessel, a copy of this permit and the shipper's Material Safety Data Sheet (MSDS) must be on board the vessel. Whenever a metal sulfide concentrate is being transported by barge, a copy of this permit and the shipper's MSDS must be onboard the tug or towing vessel. When the barge is moored, the shipping paper and the MSDS must be left on the barge in a suitable location.
- m. The following paragraphs apply only when the metal sulfide concentrates are transported by cargo vessel:
  - (1) Prior to loading, the shipper must provide the master of the vessel with detailed information regarding the hazards associated with the specific concentrate to be loaded and precautions to be followed during transportation of the concentrate. This information must include the liquefaction potential, the need to exclude water, the actual moisture content of the cargo, the flow moisture point, the transportable moisture limit, stowage factor, angle of repose, associated dust hazards, and any potential to generate toxic gases or deplete oxygen.
  - (2) Prior to loading metal sulfide concentrates, the hold of the vessel must be thoroughly cleaned of all residues of previous cargoes, loose debris and dunnage, and must be as dry as reasonably practicable.
  - (3) A metal sulfide concentrate may not be loaded on a cargo vessel if its overall contained moisture exceeds the Transportable Moisture Limit (90% of the flow moisture point), unless the vessel is specially fitted as prescribed in Section 7.2.2 of the Code of Safe Practice for Solid Bulk Cargoes published by the International Maritime Organization (IMO), 1994 edition.
  - (4) Metal sulfide concentrates must be segregated from combustible materials and separated from foodstuffs and Class 8 (corrosive) liquids.
  - (5) Liquid cargoes may not be stowed in the same hold with a metal sulfide concentrate and precautions must be taken to prevent the entry of liquids into a hold containing a metal sulfide concentrate.

- (6) After loading, the metal sulfide concentrate must be trimmed reasonably level to the boundaries of the hold. (Mechanical spout trimming will in most cases adequately distribute the cargo within the hold.)
  - (7) At least two self-contained pressure demand type air breathing apparatus approved by the Mine Safety and Health Administration (MSA) or the National Institute for Occupational Safety and Health (NIOSH), each having a thirty-minute capacity, or equivalent apparatus approved by the vessel's flag state administration, must be carried on board each cargo vessel. The master shall ensure that the breathing apparatus is used only by persons trained in its use.
  - (8) If the information provided under paragraph 9.m(1) indicates that the metal sulfide concentrate may generate toxic gases, appropriate toxic vapor detection equipment must be on board the cargo vessel. At least two members of the crew must be knowledgeable in the use of this equipment which must be maintained in a condition ready for use.
  - (9) Before any person enters a hold containing a metal sulfide concentrate, the master or other responsible ship's officer must determine that it is safe to do so, taking into account all safety precautions. Confined space entry procedures must follow Appendix F of the IMO Code of Safe Practice for Solid Bulk Cargoes, 1998 edition.
  - (10) Combustible materials and foodstuffs may not be stowed in a hold or cargo space that contains a metal sulfide concentrate.
10. **REPORTING REQUIREMENTS** - Any incident or casualty occurring while shipping under the terms of this special permit shall be reported in accordance with 49 CFR 171.15 with a copy to Commandant (G-MSO-3), U.S. Coast Guard, 2100 2nd Street, SW, Washington, DC 20593-0001, at the earliest practical moment. Any release of lead sulfide in excess of its reportable quantity shall be reported as required by the EPA regulations in 40 CFR Part 302. In addition, a record of experience under the terms of this special permit including any casualties or difficulties encountered must be sent to Commandant (G-MSO-3) upon request for renewal.
11. **EXPIRATION DATE** - February 28, 2005.

Authorized by:

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R. F. CORBIN  
Commander, U.S. Coast Guard  
Chief, Hazardous Materials Standards Division  
By direction of the Commandant

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February 28, 2001  
DATE